NUCLEAR DIVISION NEWS

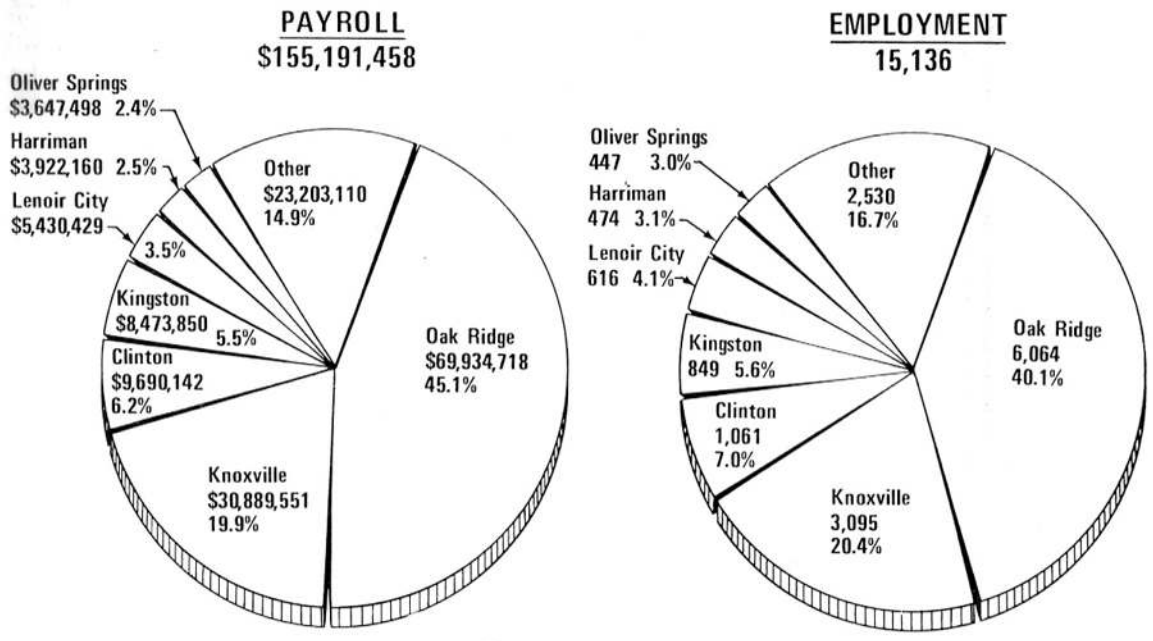
UNION CARBIDE

A Newspaper for Employees of the Nuclear Division, Union Carbide Corporation

Vol. 2 — No. 10 | OAK RIDGE, TENNESSEE | Thursday, May 20, 1971

1970 PAYROLL DISTRIBUTION

U. S. Atomic Energy Commission
Programs in Oak Ridge



Both Employment and Payrolls Up for Atomic Energy Plants

Employment and payrolls associated with the U. S. Atomic Energy Commission's broad programs of nuclear research and production in Oak Ridge both rose during 1970.

S. R. Sapirie, manager of the AEC's Oak Ridge Operations, announced that the combined payroll for AEC programs here during 1970 was $155,191,548, almost eight million dollars above the 1969 payroll of $147,619,448.

Sapirie said that the average employment for the AEC and its major operating contractors in Oak Ridge last year was 15,136, an increase of 234 over the 1969 average total of 14,902.

Area's Economy

"During 1970, as in previous years, the total Oak Ridge payroll was widespread over East Tennessee, with some employees traveling more than 50 miles one way to their jobs," Sapirie said. "Such a broad distribution of paychecks continues to enrich the area's economy."

Statistics for 1970 show that more than half of the Oak Ridge employees (9,072 or 59.9 percent) commuted to their work from cities and towns outside of Oak Ridge and took home paychecks totaling $85,256,740. Those traveling more than 100 miles round-trip totaled 204 or 1.3 percent of the total employment.

Approximately 6,064 Oak Ridge residents (40.1 percent) worked in the AEC programs and earned $69,934,718 (45.1 percent) in pay during 1970.

Many Knoxvillians

Outside of Oak Ridge, Knoxville continued to lead other cities and towns in the number of employees working at Oak Ridge. Approximately 3,095 Knoxvillians worked here last year, earning $30,889,551 in wages, representing 20.4 of the total Oak Ridge work force and 19.9 percent of the total payroll.

Employment in the U. S. atomic energy program at Oak Ridge is divided among the AEC and its principal operating contractors—Union Carbide Corporation, Oak Ridge Associated Universities and the University of Tennessee. The 1970 figures do not include employment and payrolls associated with construction activities in Oak Ridge.

Oak Ridge	6,064	(40.1%)	$69,934,718	(45.1%)
Knoxville	3,095	(20.4%)	30,889,551	(19.9%)
Clinton	1,061	(7.0%)	9,690,142	(6.2%)
Kingston	849	(5.6%)	8,473,850	(5.5%)
Lenoir City	616	(4.1%)	5,430,429	(3.5%)
Harriman	474	(3.1%)	3,922,160	(2.5%)
Oliver Springs	447	(3.0%)	3,647,498	(2.4%)
Other	2,530	(16.7%)	23,203,110	(14.9%)
Total	15,136		$155,191,458	

Blood Donors Needed

The American Red Cross Bloodmobile will visit Oak Ridge May 26 and 27 to collect blood from donors to the county's emergency blood program.

Volunteer nurses and workers will be available to process donors on Wednesday (May 26) from 4 to 10 p.m., and on Thursday (May 27) from 11 a.m. to 5 p.m. Both sessions will be at the Oak Ridge National Guard Armory.

The blood program provides "blanket protection" for all residents of Oak Ridge and Anderson County through a system of cooperating hospitals throughout the United States.

Nightingale Is New Treasurer at UCC

Stephen E. Nightingale has been elected treasurer of Union Carbide Corporation.

Nightingale joined the corporation in 1949 as an accountant at the chemicals plant in South Charleston, W. Va. He moved to the New York office in 1952 and, since that time, has been identified with both domestic and international finance activities. He was appointed assistant treasurer of Union Carbide in 1963.

He is an alumnus of Princeton University, where he received the degree of A.B. in 1944. He also received the degree of M.B.A. from Columbia University in 1949. Nightingale is a native of Providence, R. I. He and his family now live in Darien, Conn.

UCC Hydrofluoric Acid Plant South of Border

Plans for the construction of a $20 million hydrofluoric acid plant at Apodaca (near Monterrey) N. L., Mexico, have been announced by Union Carbide Corporation. The plant will be built by Union Carbide Mexicana, S.A., a subsidiary owned 60 percent by the corporation. Completion date is scheduled for mid-1973.

The new plant will have an annual capacity of 35,000 tons. It will produce exclusively for export to the United States and countries abroad. Hydrofluoric acid is used mainly in the manufacture of refrigerants, in aerosol propellants, and in the production of aluminum.

Union Carbide affiliates have been operating in Mexico for more than 35 years. The Mexican company is now highly diversified, producing a wide variety of products including Eveready batteries, Ucar graphite electrodes, Linde oxygen, Bakelite plastics, and a number of chemicals.

New Technical Scholars Named

Paducah HOG4

Two members of the staff of the Nuclear Division, Union Carbide Corporation, have been named recipients of Technical Scholarships awarded by the U. S. Atomic Energy Commission.

Phillip G. Brown, an aide in the Laboratory Division at the Paducah Gaseous Diffusion Plant, was named as a scholar. He will study at the University of Kentucky for a degree in chemistry.

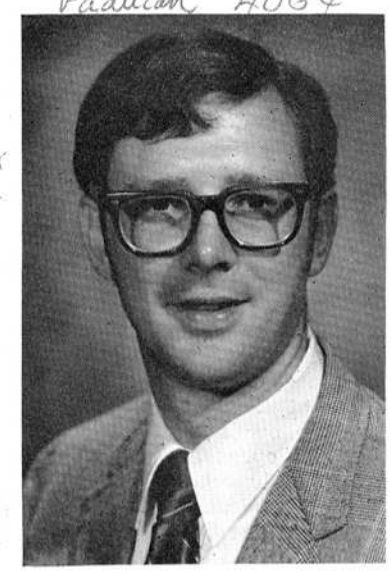
Douglas D. Roberts, a draftsman at the Oak Ridge Y-12 Plant, is the second scholar named. He will study at The University of Tennessee toward a degree in mechanical engineering.

The scholarship program is designed for employees at the technician level who have some college education. Nominations are made by each facility and selection is based on the potential of the applicant.

Each of the scholarship recipients will continue to receive his regular salary while at school. In addition, the cost of tuition and fees will be defrayed by the Atomic Energy Commission.

Brown, a native of Paducah, was graduated from Tilghman High School and completed more than 60 hours of work at the Paducah Community College. He joined the staff of the Paducah Gaseous Diffusion Plant in 1968 where his work has included process control, analytical duties, and assignments in the technology section. He is married to the former Deborah Hayden of Paducah. They live at Black Oak Apartments, Paducah.

Roberts, a native of Madisonville, Tenn., was graduated from Tellico Plains High School and has been continuing his studies at UT. He joined Union Carbide at the Oak Ridge Y-12 Plant in 1967. He is married to the former Linda Patterson of Niota, Tenn. They live at 111 South Alabama Road, Oak Ridge.



Phillip G. Brown

Douglas D. Roberts

Crossville Trip Planned by AARP

Frank Cheney, American Association of Retired Persons state director, will speak to the local AARP group today at 1 p.m. at the Civic Center. Among other subjects, he will discuss the workshop to be held in Nashville, June 3.

A Home Economics class from Oak Ridge High School will serve refreshments at today's meeting.

The AARP advises that there are a few seats remaining on the bus for the trip to Crossville May 22, to see Paul Crabtree's "Step to the Music." Lunch will be at the re-built Cumberland State Park restaurant. Checks for the trip should be mailed to Mrs. Phillip Collett, 108 Packer Rd., Oak Ridge.

May 31 Holiday

Monday, May 31, is an official holiday for Nuclear Division employees, as we observe the second of the newly-appointed long-weekend holidays.

Requests High

ORGDP's Monthly Uranium Shipments Total $13 Million

The Oak Ridge Gaseous Diffusion Plant shipped approximately 195,897 pounds of enriched uranium during April for use in nuclear reactors in Pennsylvania and South Carolina, with the bulk of April's shipments going to West Germany.

The uranium, which was enriched at a charge of more than $13 million, filled orders authorized under the AEC's Toll Enrichment Program, under which separative work is performed for the customer, providing fissionable material to be used in nuclear reactors.

Meanwhile, requests for toll enrichment services reached a high in April of 512,817 pounds for an estimated charge in excess of $28 million. Foreign requests came from Spain, The Netherlands and Japan. The largest single request during April came from the State of Michigan for its D. C. Cook site reactor. Other states requesting toll enriching service included South Carolina, New York, Illinois and Nebraska.

The AEC's gaseous diffusion plants at Paducah, Ky. and Portsmouth, Ohio, are also involved in the uranium enrichment program.

Central Service for Oak Ridge Employees

Nuclear Division Payroll Staff Gets Checks Out Fast and Precisely

By JOHN HAFFEY

Like the old-time trains, it used to be that paychecks for employees in large businesses and industries were almost always behind schedule.

Generally, payroll people required at least a week and sometimes much longer after the close of a pay period to process all necessary details. And as time went on, the need to reflect changing figures on taxes, benefits, and other payroll deductions made the job of paying promptly even more difficult.

Better and Faster

But despite increasing complexity, the Nuclear Division's Central Payroll, a general staff group located at the Computing Technology Center, has become a master of the art of making payday come on time. As a matter of fact, employees at the Nuclear Division's three Oak Ridge plants —Oak Ridge National Laboratory, the Oak Ridge Gaseous Diffusion Plant, and the Oak Ridge Y-12 Plant—now receive checks faster and more accurately than ever before.

The secret? Computers, communication, and cooperation.

Each month the payroll staff, under the direction of M. W. Mills, works closely with plant time offices, service and staff functions to pay the more than 14,000 Carbide employees in Oak Ridge. Of this total, more than 6,600 choose to have their checks mailed to a bank, another 2,900 prefer them at home, and the others pick them up at plant pay sites.

In all, bank checks are mailed to more than 170 different banks in 19 states, including some 60 out-of-state banks and about 114 in Tennessee.

Service Is Good

The checks do everything but baby-sit for you — recording wages and overtime; deducting income tax, social security, and insurance costs; and handling special deductions such as those for the United Fund, U. S. savings bonds, and even safety shoes. All of this and thousands of other changes—such as pay raises—are "fed" into the computer and conveniently and efficiently recorded.

The result is that, for weekly and hourly employees, checks reflect all such factors and are still out within three days of the end of a pay period. For example, the most recent pay period for weekly and hourly employees ended Sunday at midnight. By Monday night, all checks were written; by Tuesday all were prepared for delivery; and by Wednesday, they were either in the mail or at the plant pay sites. If you haven't received yours yet, it's waiting on you.

And monthly salaries, partly because there are no overtime considerations, are actually paid **before** they are due. Usually monthly employees have their checks covering the full month by about the 26th of each month.

Do the computers ever goof? Sure, but not often. The combination of modern computing techniques and highly skilled employees make mistakes relatively few and far between. And the result is a payroll service that is rivaled by only a few in the entire country.

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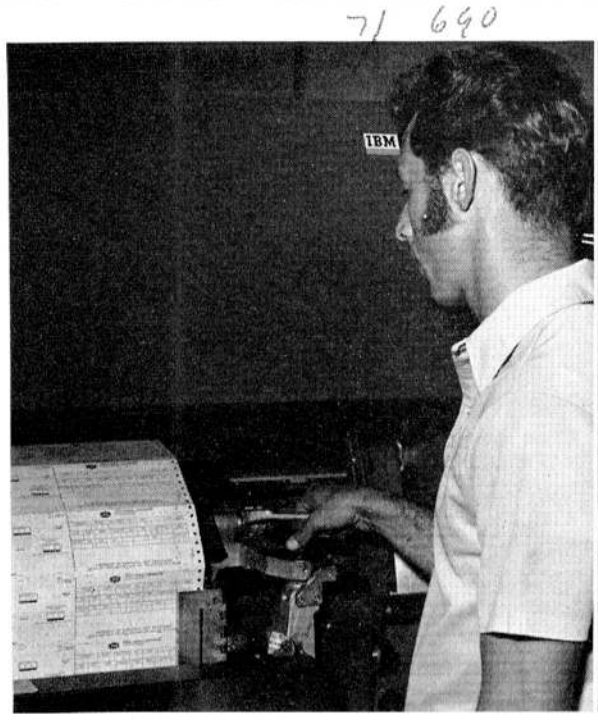

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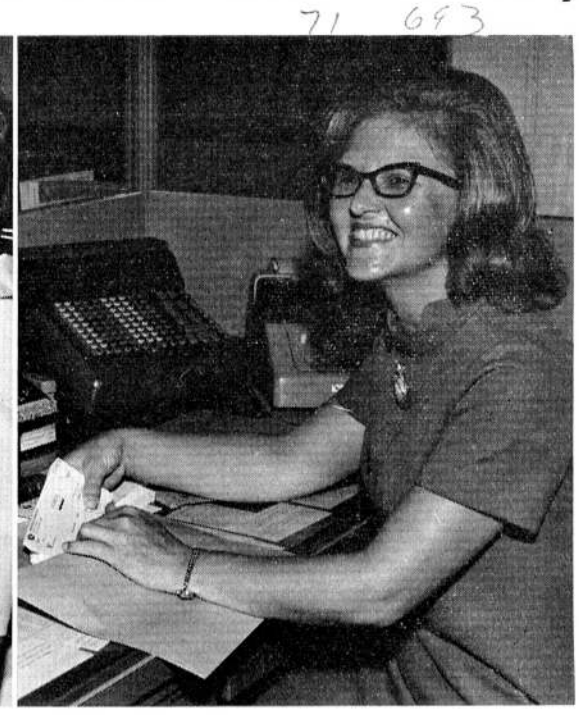

FAST DELIVERY—Just before payday, after deduction factors have been processed, the more than 14,000 computerized checks are printed and mailed out over a two-day period. Working at the computer printout, left, is Mike Russell, and, at right, preparing checks for mailing is Doris Bridges.

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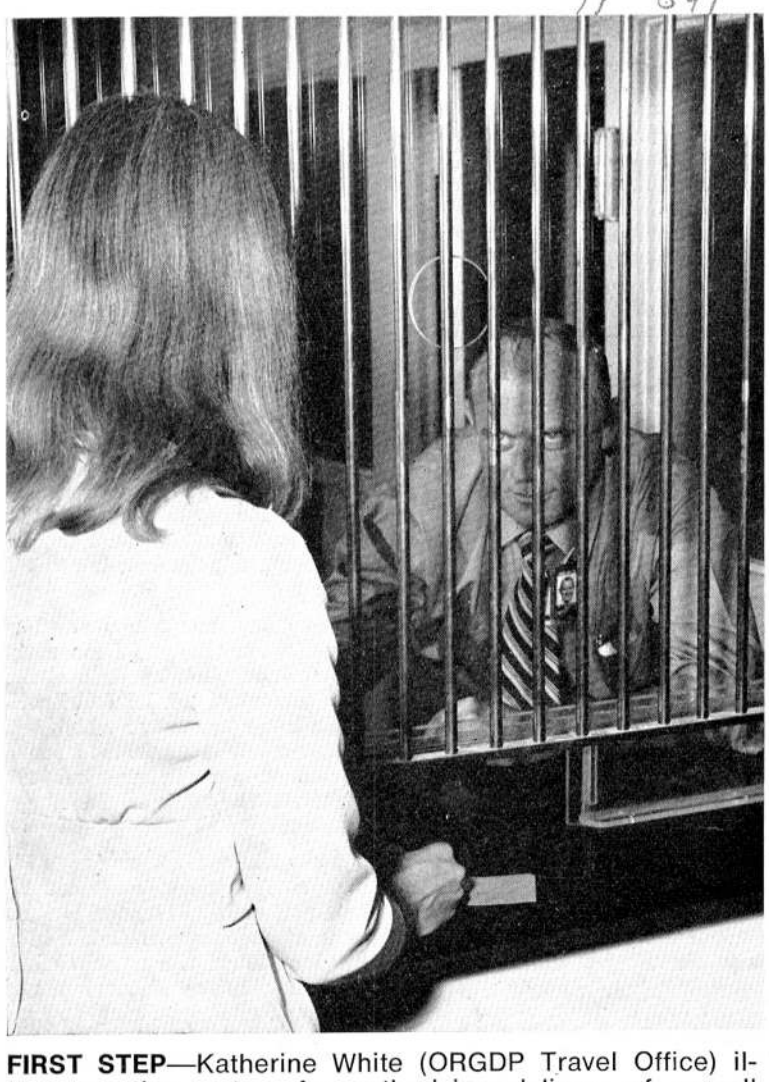

FIRST STEP—Katherine White (ORGDP Travel Office) illustrates the system for authorizing delivery of payroll checks. By visiting a plant time office, in this case at ORGDP, the employee has the option of receiving his check at a plant pay site or having it mailed to his home or bank. Explaining alternatives is E. T. Strunk, supervisor of the ORGDP Timekeeping, Cashier, and Travel Department. The authorization information is then forwarded to Central Payroll.

'Safety in Salt' Film Available from AEC

A new color motion picture describing the Atomic Energy Commission's proposed project for disposing of radioactive waste in underground salt deposits is now available for loan to the public.

The 16 mm film entitled "SAFETY IN SALT: The Transportation, Handling and Disposal of Radioactive Waste" is 28 minutes long and was produced for the AEC by the Sandia Laboratories, Albuquerque, N. M.

Last June, the AEC announced a proposal to establish the first Federal Radioactive Waste Repository at a site near Lyons, Kan. This film outlines and describes the various methods for transporting the waste to the repository that are being considered.

A considerable portion of the film is devoted to a public hearing that was conducted in Lyons by AEC representatives for members of the general public and the news media. Another segment of the film describes the tests which are done to determine that the approved packages for radioactive waste will withstand severe transportation accidents without release fo radioactivity.

The film may be borrowed, free of charge, from the AEC Film Library here.

NEWS

Published Bi-Weekly For The Employees Of UNION CARBIDE CORPORATION NUCLEAR DIVISION

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UNION CARBIDE

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71 692

'FEEDING COMPUTER'—After receiving authorization information from a plant time office, Central Payroll employees such as Juanita Elliott feed the material into the computer system at the Computing Technology Center. For example, 'code numbers' for banks automatically direct each check according to the employee's request. Later, the computer also receives new information about changes in wages, benefits, and other deductions.

New Booklets Added to 'Atomic World' Series by Atomic Energy Commission

Four new booklets have been published by the Atomic Energy Commission for use by junior high school students and their teachers in studying nuclear energy and its many applications.

The four booklets bring to six the number of titles now printed in the new "World of the Atom" series, prepared and distributed to the public by the AEC's Division of Technical Information Extension (DTIE) here.

Robert L. Shannon, manager of DTIE, said the purpose of the "World" series is to supplement the limited amount of information on nuclear energy currently available specifically at the junior high level, and to strengthen science education in general.

The four new booklets are: "The Mystery of Matter," "Nature's Invisible Rays," "Preserving Food with Atomic Energy," and "Atomic Energy and Your World." Previously published were "Atomic Pioneers," and "The Mysterious Box: Nuclear Science and Art."

"The Mystery of Matter" is authored by William G. Pollard, executive director of Oak Ridge Associated Universities. Pollard, author of numerous articles and books, adapted this booklet on matter from a chapter in his most recent book, "Science and Faith, Twin Mysteries." The booklet traces early Greek theories of matter through present day speculations on the existence and composition of quarks in the universe.

"Nature's Invisible Rays," is authored by Jacob Kastner, senior physicist at the AEC's Argonne National Laboratory, and explains

(Continued on Page 6)

UNION CARBIDE

—Y-12 BULLETIN

Thursday, May 20, 1971

139 748

Several Y-12ers Set Technical Meetings

Baucum

Pohto

McAllister

McIntyre

Technical papers authored by Oak Ridge Y-12 Plant personnel has been presented at national meetings this month.

H. A. Pohto, Mechanical Manufacturing Design, discussed "Aspects of Brittle Fracture Failure" at the American Society of Mechanical Engineers' First National Congress on Pressure Vessels and Piping in San Francisco, Calif., May 10-12. He also served on a panel discussion with four other engineers discussing "Pressure Vessel Failures." The theme of the conference was "Safety and Reliability."

W. E. Baucum, Laboratory Development, discussed "Residual Stress Analysis of Thin Sheet Material by X-Ray Diffraction" at the Society for Experimental Stress Analysis Meeting in Salt Lake City, Utah, May 18-21.

Liddle

A paper authored by R. H. Liddle, Product Engineering; J. M. McIntyre, Chemistry Development; and C. E. McAlister entitled "Fluorine Gas as a Cleaning Agent for Apollo Bulk Sample Contrailers" will be presented at the American Association for Contamination Control Meeting in Washington, D. C., May 24-25.

Uranium Power

A single pound of uranium ore, once it is processed and enriched, can produce as much energy as 600,000 pounds of coal, or enough electricity to light a 100-watt bulb for 2,600 years. The uranium costs about seven dollars a pound.

SAFETY SCOREBOARD

The Y-12 Plant Has Operated

139,000 Man-Hours

Or 104 Days

(Unofficial Estimate)

Through May 16

Without A Disabling Injury

SAFETY AT HOME, AT WORK, AT PLAY

Late May finds more Y-12ers marking important dates with Union Carbide Corporation. Congratulations.

25 YEARS

Perry D. Duke, Utilities Administration, May 9.

Preston J. Conerly, Beta Two Forming, May 14.

Charles R. Schmitt, Chemistry Development, May 15.

Lawrence H. Perry, Fire Department, May 20.

Clyde W. Clower, Reproduction, May 22.

Robert R. White, Reproduction, May 29.

20 YEARS

Ulysses H. Ingle, Area Five Maintenance, May 15.

James T. Berry, Beta Two Forming, May 15.

Hallie S. Wade, Chemical Services, May 15.

John L. Young, Sr., H-1 Foundry, May 15.

Joe K. Raper, Dispatching Department, May 15.

Dorothy M. Tompkins, Plant Records, May 16.

Fred Campbell, Data Systems Development, May 16.

Ralph E. Gibson, General Machine Shop, May 21.

Robert L. Gouldy, General Shop Job Liaison, May 21.

William L. Winters, Special Services, May 24.

John W. Anthony, General Machine Shop, May 24.

Jack D. Lindsey, Reproduction, May 24.

Carlyle A. Goddard, Research Services, May 24.

Charles R. Harris, Material Control, May 25.

Earl J. Tullos, Product Engineering, May 28.

Hoyt J. Tinsley, Production Assay, May 28.

Charles W. Hamill, Ceramics and Plastics Development, May 29.

Robert H. Angel, Chemical Services, May 29.

Max F. Wallace, Chemical Services, May 29.

Ted F. Wagner, Central Employment Office, May 29.

Victor E. Justice, Chemical Services, May 31.

Gurnie D. Treece, Process Maintenance, May 31.

Harvey F. Ballenger, Technical Publications, May 31.

15 YEARS

Ernest W. Young, Alpha Five Processing, May 16.

Ray W. Wear, Alpha Five Processing, May 16.

Oscar T. Smith, Mechanical Design Engineering, May 21.

Roy A. Campbell, Alpha Five Processing, May 23.

(Continued on Page 4)

AUDIO-VISUAL STUDIO—Open House will be held in Y-12 next week for Nuclear Division employees to see the facilities in the new audio-visual studio in building 9766. R. L. Wesley, Technical Information Services, is seen above taping a slide show.

Y-12's Audio-Visual Studio To Have Open House Next Week

An open house will be held at the new Y-12 audio-visual studio in building 9766, 8 a.m. through 4:30 p.m. the week of May 24-28. Persons responsible for planning, writing or producing training or orientation programs are especially encouraged to visit the facility.

Reference Library

The two-room studio, constructed as part of a remodeling program of the building, was designed by Y-12 Engineering Division personnel and is the responsibility of Technical Information Services. One of the rooms serves as a projection room and a soundproof studio for recording audio and video tapes, while the other room serves as a storage area and film editing room.

The facility also acts as the Plant's loan and reference library for slides, photographs, Y-12 motion pictures, brochures and 35 mm slide projectors. Other types of projection and audio equipment also are available for use.

Films Available

Thus far this year the studio has been used in producing numerous tape-slide presentations for orientation, training and safety programs, in addition to videotape productions used in connection with classified programs. The recent addition of a videotape system has made it possible to offer a wider range of services.

The films available for loan, made at Y-12 in previous years (1966-70), include "Machining and Measuring in Microinches," "Automatic Toolsetting for Precision Machining," "Mass Spectroscopy," "The Safe Handling of Enriched Uranium," and "Sprinkler Demonstrations on Reactive Materials."

6-14974

PUSH U. S. SAVINGS BONDS—Y-12 Savings Bond Drive coordinators meet with E. A. Pluhar for a concentrated effort during May to subscribe at least 50 percent of all employees to payroll savings with the purchase of U. S. Savings Bonds. Seated, clockwise, are John Harding, W. T. Smith, D. R. Passons, Jo Ann Isham and Harold Bell. Standing, from left, are Pluhar, Drive chairman in Y-12; J. H. Marcum, Bill Hicks, Harry Raley, and Ward Wampler. J. J. Kurtz, Art Neeley and T. A. Williams were missing from the photograph.

J. C. Lowe, Dispatching, Rites Held in Maryville

John C. Lowe, Dispatching Department, died May 9, after a rather lengthy illness. He had been off from work several weeks.

Mr. Lowe

A native of Sevierville, Mr. Lowe came here in early 1954. He worked at Aluminum Company of America, Alcoa, and farmed before coming here. He was a veteran of World War II, serving in the U. S. Army from 1943 until 1946.

Survivors include his wife, Mrs. Hazel Stooksbury Lowe, at the Lowe home at Route 3, Maryville, two sons, Randall and Wayne Lowe; parents, Mr. and Mrs. Cas Lowe; brothers, Letcher, Sherley, Joseph and Jimmy; sisters, Mrs. Fern Loveday and Mrs. Wanda Fox.

Funeral services were held at Atchley's Chapel, and interment followed in the Grove Cemetery.

James Taylor Named Fabrication Foreman

James R. Taylor

The Fabrication Division in Y-12 announces the promotion of James R. Taylor to a foreman, in General Expediting and Auxiliary Services.

Taylor came to Y-12 September 8, 1953. He is a veteran of both the U. S. Navy and U. S. Army, serving in the European Theatre during World War II with the Army. Prior to coming with Carbide, he was with the Tennessee P-Nut Company and Bowers in Knoxville. In 1949 he worked with Fairchild Engine and Aircraft Corporation in Oak Ridge, and in 1951 he went with Atlas Engineering Corporation, also in Oak Ridge.

The new foreman lives at 2737 Lay Ave., Knoxville. Mrs. Taylor is the former Maude Winton. The Taylors have three children, Deborah, Paul and James.

Taylor is a native of Knoxville.

AUTOMATIC PURCHASING

You work hard for your money . . . you help make money for somebody else . . . but do you ever pay yourself? You can by joining the Payroll Savings Plan for the automatic purchase of United States Savings Bonds.

Bowers-Rowan Get Early Lead on South Hills Tees

The Bowers-Rowan pair stand atop the South Hills Golf League, as a new bevy of Y-12 golfers hit the greens here in Oak Ridge.

The 14-team league began play the week of May 3.

Team	W	L
Bowers-Rowan	11	1
F. Parrott-Parker	10	2
Cowen-Troutman	9	3
Tipton-Watlington	8	4
Leete-W. W. Jones	8	4
Henderson-Nicley	7	5
Wright-Whithorn	6	6
Cogswell-Jones	6	6
Norris-O'Neal	6	6
Pappas-Waldrop	5	7
Loupe-Ludwig	4	8
Collins-Cabe	4	8
Ferree-King	0	12
Cooper-Parker	0	12

Melton Hill Greensmen Begin 14-Team League

After two weeks of the Melton Hill Golf League's new season, the Alvey - Carmack, Reed - Sherrod pairs are tied with no losses. Recently, Carl Dorr shot a 34 . . . Bob Carmack and Jim George a 36 each.

League standings, May 11:

Team	W	L
Alvey-Carmack	12	0
Reed-Sherrod	12	0
McElroy-Riggs	11	1
George-Babb	8	4
Hogg-Tiller	8	4
Emery-Holdaway	7	5
Hill-Raymer	7	5
Stephens-Wetzel	7	5
Sherrod-Wyrick	5	7
Ammons-Jessen	4	8
Crowder-McDonald	1	11
Burrus-McGinnis	1	11
Babb-Evans	1	11
Amerine-Briscoe	0	12

J Shift Golfers Opening Play To Be at South Hills

A new golf league hit the turf this Spring as South Hills J Shift men took to the swards to initiate a 10-team fight.

Pryor - Lard and Dick - Wheeler lead the parade after two weeks of competition.

League standings follow:

Team	W	L
Pryor-Lard	12	0
Dick-Wheeler	12	0
Collins-Collins	9	3
Sise-Smith	8	4
Clabough-Harris	6	6
Hawk-Baxter	6	6
Cornett-Scarbrough	5	7
Collins-Collins	1	11
Miller-Kirby	1	11
Lay-Smith	0	12

Y-12 Milestones

(Continued from Page 3)

Louie M. Scott, Radiation Safety, May 8.

Howard S. McClellan, Cafeteria, May 8.

Ronald G. Thompson, Product Engineering, May 10.

Leonard A. Abbatiello, Fabrication Systems Development, May 11.

Clayton E. Wilson, Area Five Maintenance, May 24.

Donald E. Parten, A-2 Shops, May 25.

John Caroll, Jr., Buildings, Grounds and Maintenance Shops, May 28.

Roger L. Letner, Buildings, Grounds and Maintenance Shops, May 28.

Anders R. Rutherford, Jr., Alpha Five Processing, May 30.

10 YEARS

Judson T. Kidwell, A-2 Shops, 9212, May 15.

Garrett Baird, Jr., Dimensional Inspection, May 15.

Thomas M. Faulkner, Dimensional Inspection, May 16.

Richard L. Smith, Alpha Five East Shop, May 23.

Peggy C. Hardin, Product Information Center, May 26.

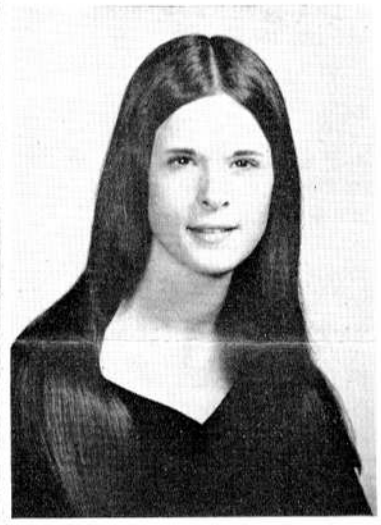
Ride wanted from Alger Road, East Village section, Oak Ridge to North Portal, straight day. R. C. Dixon, plant phone 3-7141, home phone Oak Ridge 482-3653.

Ride wanted, or will join car pool, from Golf Range Apartments, 3700 Sutherland Ave., Knoxville, to North Portal, straight day. Kathy McGinnis, plant phone 3-5947, home phone Knoxville 588-6116.

Ride wanted from East Knoxville to Central Portal, J Shift. Joe Goodman, plant phone 3-7806.

Ride wanted from University of Tennessee area, Knoxville, to Bear Creek Portal, 4:30-12:30 shift. W. A. Self, plant phone 3-5807, home phone Knoxville 525-1800.

WELCOME TO SAFETY—Richard A. Weaver, left, is welcomed into the Safety Department by Clarence Johnson, safety head, at right. Weaver holds a B.S. degree from Tennessee Technological University, and is a native of Johnson City.



Sharon Lynn Morris

Sharon Morris Gets Honors in Education

Sharon Lynn Morris has been selected for membership in Kappa Delta Pi, honorary society in education. Membership is based on high scholastic records and an exhibited professional attitude which enables growth in the field of education. It is also based on grade-point average and recommendations of the faculty in the college of education.

Miss Morris is a senior at Tennessee Technological University, and has been on the honor roll since enrolling at Tech in her sophomore year.

She is the daughter of Mr. and Mrs. Robert S. Morris, Ewing Road, Powell. Her father is in Y-12's Civil and Architectural Engineering Department.

BUSY PEOPLE are happy people. And yet, amazing as it is, if you will give to the average human being complete control over his own time, he will arrange it so that most of his hours are spent in tedium, in boring and vaguely uncomfortable and unsettling idleness. There's something about the human being's perverse nature that makes him never want to work unless he absolutely has to, even when you prove to him that he's happiest when he's busiest.

—Earl Nightingale

Eight Teams Tee-Off At Southwest Point

Southwest Point began golf play on May 12. Larry Jones was low handicap golfer the first week, with a score of 36.

Initial standings follow:

Team	W	L
Mee-Wright	6	0
Jones-Morgan	6	0
Coffee-Davenport	6	0
Brown-Naleppa	4	2
Elkin-Smith	2	4
Briscoe-Williams	0	6
Bolt-Pelfrey	0	6
Burger-Stanton	0	6

Stooksbury Nuptials

Mr. and Mrs. John R. Stooksbury

STOOKSBURY—CLEVENDER

Sharon Baptist Church was the scene of the April 4 wedding of Miss Cynthia Sue Clevenger and Mr. John Rex Stooksbury. The Rev. James E. Robertson officiated at the afternoon rites.

The bride is the daughter of Mr. and Mrs. Curtis I. Clevenger, Collier Rd., Powell, and the bridegroom is the son of Mr. and Mrs. Thomas E. Stooksbury, Brown Ln., Powell. The older Stooksbury is in Y-12's Beta Two Shop.

The bride is employed by Jenkins and Burkhart Veterinary Clinic, Oak Ridge; and the bridegroom is serving with the U. S. Navy and expects to be stationed in Japan.

JOINT EFFORT—A joint development, 'Improvement in or Relating to Graphite Bodies,' has brought Earl Stooksbury and John Napier, left to right, a $1 patent application. George Marrow, Materials Engineering Development superintendent, right, presents the development engineers their congratulatory letters.

THE CARBIDE COURIER

Thursday, May 20, 1971

D. E. Fain

Gas-Flow Measure System Described By D. E. Fain in Talk

D. E. Fain, a physicist at ORGDP's Gaseous Diffusion Development Division, presented a technical paper May 14 on the closing day of a four-day symposium at the William Penn Hotel in Pittsburgh, Pa.

The paper, entitled "A Versatile Volumetric System for Measuring Gas Flows," was coauthored by Fain and W. H. Harber. Harber is also with the Gaseous Diffusion Development Division.

Described in the report is an ORGDP-developed apparatus that measures gas flows over a range of six orders of magnitude with a precision of 0.1 percent from about one standard liter per minute to about 0.001 standard cubic centimeter per minute.

The device uses a capacitance manometer with a special electronic trigger to give the required precision in the flow measurement. A critical orifice calibrated by a gravimetric flow system checks the accuracy of the measurements at the upper end of the flow range.

The meeting — the "Symposium on Flow, Its Measurement and Control in Science and Industry" —was co-sponsored by the American Institute of Physics, the American Society for Mechanical Engineers, the Instrument Society of America, and the National Bureau of Standards.

Play It Safe!

Take these tips. Whether hiking 2,404 miles on the Appalachian Trail or merely going on a one-day outing to the woods, there's one very important thing to remember: Safety in the outdoors. Many of today's Americans who can navigate an urban freeway with ease are at a complete loss when confronted with a forest trail. And their lack of knowledge about the great outdoors can sometimes be a matter of life or death. To help them prepare for their outdoor trip — and survive when they get there — USDA's Forest Service has revised its popular publication, "Outdoor Safety Tips." Just the right size to fit your pocket, it contains such information as how to prepare for your trip; what to do if you get lost; how to signal for help; and first aid tips. Copies of the booklet (PA 887) are available from the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20402, for 15 cents a copy.

INSTITUTE SPEAKERS—ORGDP speakers at the 69th national meeting of the American Institute of Chemical Engineers included the above men, from left, E. Von Halle, L. P. Pasquier, J. H. Pashley, R. A. Ebel and R. H. Dyer.

20 Years' Service

M. H. Sproles	5-02-51
H. J. Stephenson	5-07-51
W. R. Allmon	5-07-51
L. G. Hamilton	5-07-51
B. E. Black	5-08-51
W. P. Human	5-14-51
R. M. Chadwick	5-16-51
R. L. Wilkins	5-21-51
W. M. Harvey	5-21-51
N. A. Hay	5-23-51
H. E. Shell	5-26-51

10 Years' Service

W. A. Martin	5-05-61

Nuclear Division Men Attend Gaseous Diffusion Symposium

Six staff members of Union Carbide Corporation's Nuclear Division participated in a special symposium on "Isotopic Separation of Uranium by Gaseous Diffusion" May 18 as a part of the 69th national meeting of the American Institute of Chemical Engineers.

Attending the meeting in Cincinnati, Ohio, were R. H. Dyer, R. A. Ebel, E. Von Halle, J. H. Pashley, and L. P. Pasquier, who are associated with the Oak Ridge Gaseous Diffusion Plant; and E. C. Breidert, of the Paducah Gaseous Diffusion Plant.

Pashley, who is in charge of the Process Systems Development Department of the Gaseous Diffusion Development Division at ORGDP, served as symposium chairman. Assisting as vice chairman was R. W. Brown, of the Goodyear Atomic Corporation.

Chemical engineers have made major contributions to uranium isotope separation technology, yet this is the first AIChE symposium to feature gaseous diffusion.

The symposium was primarily concerned with providing an overview of the isotopic separation of uranium by gaseous diffusion, with emphasis on the relation of the gaseous diffusion process to the nuclear power industry considerations in optimising the process, and the techniques which make it possible.

Three of the symposium's five papers were presented by Nuclear Division staff men.

Von Halle spoke on "Isotope Separation Processes for Uranium," making an economic and theoretical comparison of the different methods proposed for uranium enrichment. Ebel discussed "The Design of a Gaseous Diffusion State," illustrating the basic considerations in design and development. This report was coauthored by Pasquier.

And Dyer and Breidert both spoke on a "Diffusion Plant from the Operations Point of View," using a hypothetical case where a utility requires enriched uranium to fuel its nuclear reactor in order to illustrate the position of a gaseous diffusion plant in the nuclear power fuel cycle.

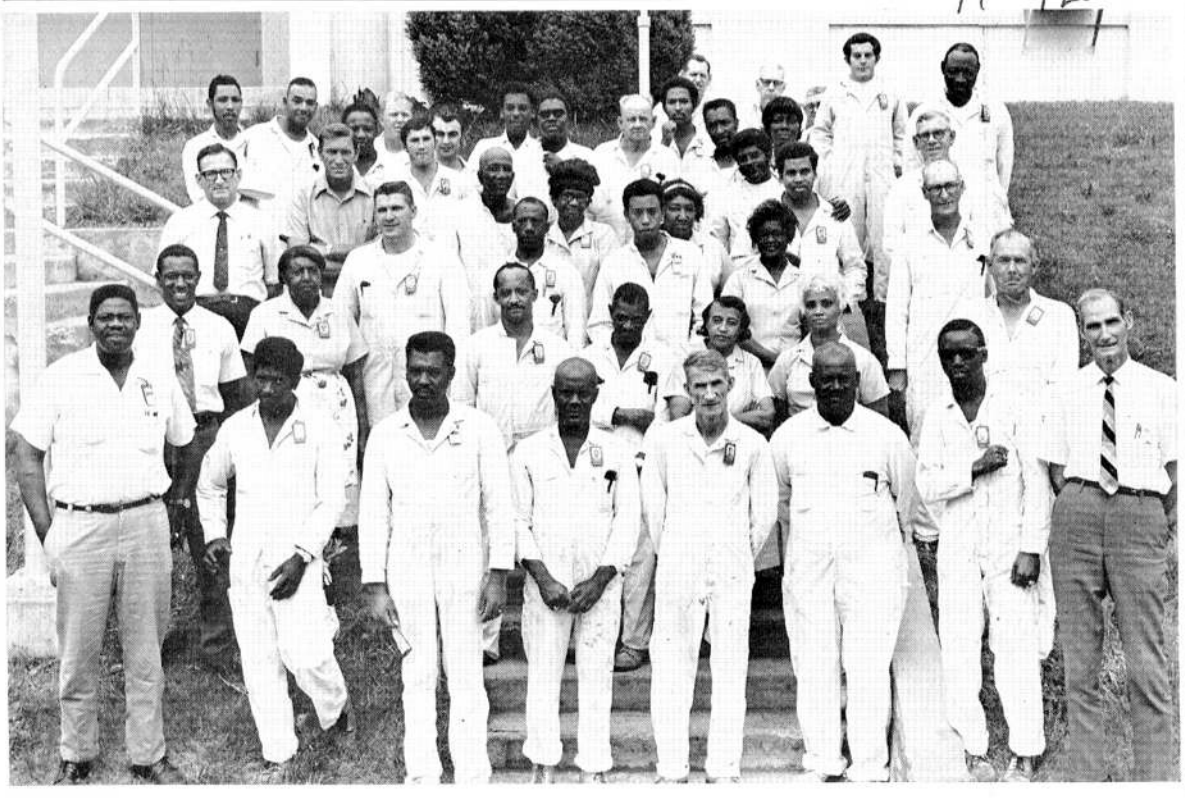
The gaseous diffusion symposium was one of several included in the four-day AIChE national meeting.

Engineering

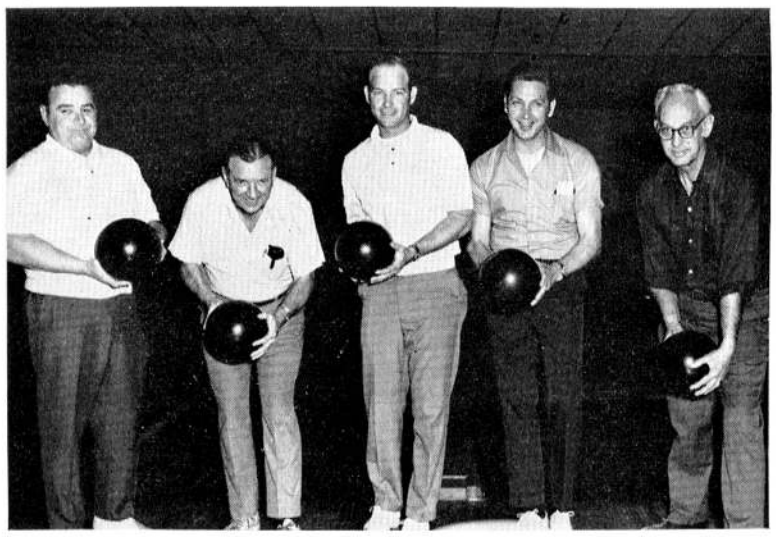
By F. Dodge

S. J. Senatore, superintendent of Process Design Department, spoke to the local Naval Reserve recently on "Power Requirements for the United States through the Year 2000."

The talk covered the subject of power growth and power costs, as well as the capital costs of power stations, both nuclear and fossil-fuel-fired. Also, the fuel costs and the resulting total power generating costs to the consumer were presented. A discussion was presented on the availability of fossil fuels (coal, gas and oil) and the impact of the environmental concerns on the cost of both the fossil and nuclear power stations. Senatore concluded with the program plans of gaseous diffusion plants for meeting the separative work requirements for anticipated growth in the conventional light-water reactors.



PARTICIPATION HIGH—More than 70 percent of the employees in ORGDP's Janitors Department has signed up in the Payroll Deduction Plan for the purchase of U. S. Savings Bonds. This group had 100 percent participation in the United Fund drive in the plant for the past several years.



WEDNESDAY CHAMPIONS—Champions of the Wednesday League are the Pirates, who repeat from last year. They won both halves of this year's race, too. From left are Frank Manning, Lyle Hensley, Roy Dukes, Stan Finch and Charlie Johnson. Other members not shown are Ray Rinehart, Wayne Bryan and Phil Mason.

Carney, Simmons, Terry To Retire Here June 1

H. A. Carney **E. L. Simmons**

Horace A. Carney, Ernest L. Simmons and Owen L. Terry join the growing ranks of retirees from Oak Ridge Gaseous Diffusion Plant on June 1.

Horace A. Carney has been employed as chief telephone accounting clerk in Central Communications, coming here April, 1947. He worked with the Atomic Energy Commission and in the finance office of the U. S. Army before coming to K-25.

Carney was born in Granite, Okla. He attended public schools in Oklahoma City. Mrs. Carney is the former Viola Palmer Funk. She is a native of Florida. They have four children, including two adopted Korean orphans: Mary Alice, Newark, N. J.; Bert, Phoenix, Ariz.; Camille, Laurell, Md.; and Diane, a student at Middle Tennessee State University. The Carneys live on Route 2, Kingston.

Following retirement, he plans to do organic gardening, work with internal combustion engines, do some woodworking, and "get work done around the house that has been put off because of lack of time."

Ernest L. Simmons

Ernest L. Simmons has been employed here since February, 1951. Before coming here he worked on various construction jobs in Oak Ridge and before that he farmed. He served over four years in the U. S. Army in Europe during World War II.

Simmons was born in Winchester, Tenn., and attended public schools in Townsend. Mrs. Simmons is the former Lillie Pearl Holloway. They live at 250 South Benedict Ave. in Oak Ridge.

Owen L. Terry

Owen L. Terry has been a designer in the Civil Engineering Department of the Engineering Division. He has been here since March, 1954, coming with Union Carbide from Fulton Sylphon Co. in Knoxville. Before that he worked for the U. S. Army Corps of Engineers in Florida, and in Texas for Union Carbide at Texas City.

Owen L. Terry

Terry is a native Tennessean, born in Pioneer. He attended school in Knoxville. Mrs. Terry, from Knoxville, is the former Mable E. Ferguson. They have two daughters, Mario and Frances, and a son, Richard Lee, who works for the Tennessee Valley Authority in Knoxville.

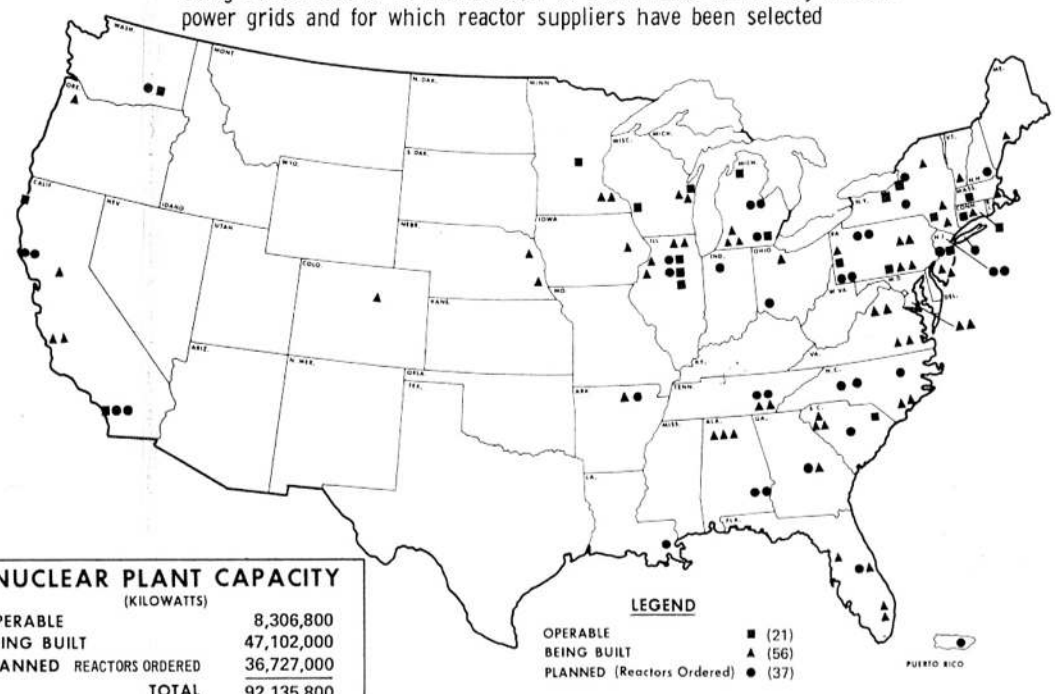
Terry says that he has no definite plans except to finish several projects in his home at 3902 Wayne Rd., Knoxville.

SAFETY SCOREBOARD

OUR PLANT
Has Operated
139,000 Safe Hours
Through May 13
Since last disabling injury on May 4

NUCLEAR POWER PLANTS IN THE UNITED STATES

The nuclear power plants included in this map are ones whose power is being transmitted or is scheduled to be transmitted over utility electric power grids and for which reactor suppliers have been selected



NUCLEAR PLANT CAPACITY
(KILOWATTS)

OPERABLE		8,306,800
BEING BUILT		47,102,000
PLANNED	REACTORS ORDERED	36,727,000
	TOTAL	92,135,800

TOTAL ELECTRIC UTILITY CAPACITY AS OF JANUARY 31, 1971: 340,718,926 KILOWATTS

U.S.Atomic Energy Commission

Needed: Clean Air; Facts About Pollution

Air Pollution Is Going to Get A Lot Worse!

Because **MORE PEOPLE** by the year 2000 **(when most of us will still be alive)** there will be over 320 million people in the U.S. (and 85% of them will live in **cities.**)

Will drive **MORE CARS**—the number of motor vehicles in this country increases **twice as fast** as the number of people!!!

And use **MORE POWER**—the use of electric power will increase 5 times by the year 2000—with 5 times as much air pollution—unless we go to a lot more nuclear powered generating stations.

And create **MORE WASTE** — more people means more waste to burn—higher living means more waste **per person.**

What can we do?

(To be continued in next issue.)

15 Years' Service

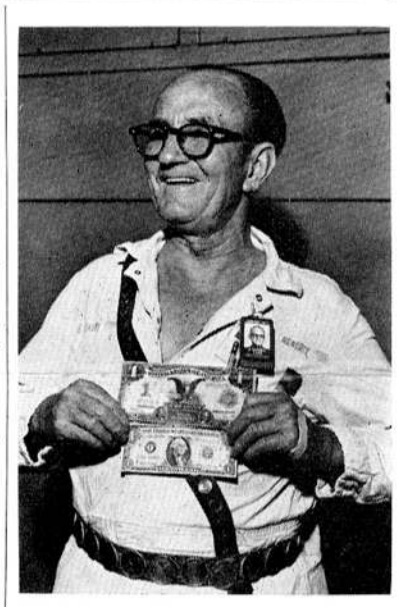
K. U. Berkau	5-07-56
W. N. Barron Jr.	5-14-56
B. J. Kemper	5-17-56
J. B. Adams	5-22-56
G. D. Bowen	5-25-56
M. C. Vest	5-29-56

Pollution Eaters

In every lake or river or stream are tiny little microorganisms that eat pollution. That's all they do. Eat and get fat and sink to the bottom. Where they won't bug you. But sometimes the water gets too polluted. And the little bugs start starving for air, and stop reproducing and eating. That's the problem Union Carbide's Linde Division took on. We've just come up with a system that gives these little bugs a straight shot of pure oxygen. It makes them eat and eat and eat. And reproduce more rapidly, so even more little bugs start eating. Already we've used this oxygen aeration idea to save a sick river in Louisiana, and we think it can revolutionize waste water treatment. Hungry bugs isn't the only idea we've had to clean up water pollution. We've had a lot of good people working on detergents that chemically break down and don't spoil the water. And new instruments to constantly watch the water that goes into rivers and the like. Back to bugs . . . You should see the way they stuff themselves once you whet their appetites . . . Copy from the latest Union Carbide Corporation ad.

U. S. Savings Bonds

U. S. Savings Bonds continue to be one of the most effective ways to save money. Payroll deductions make it easy.



FIRST DOLLAR — Noah Hendrix holds the first dollar that he made when starting to work in the mines at age 16. Notice the difference in the size of the dollar bill then and now. Hendrix wears two honest-to-goodness money belts; the one around his waist has silver dollars stuck on it; the one across his shoulder is loaded with dimes.

$aves 1st Dollar

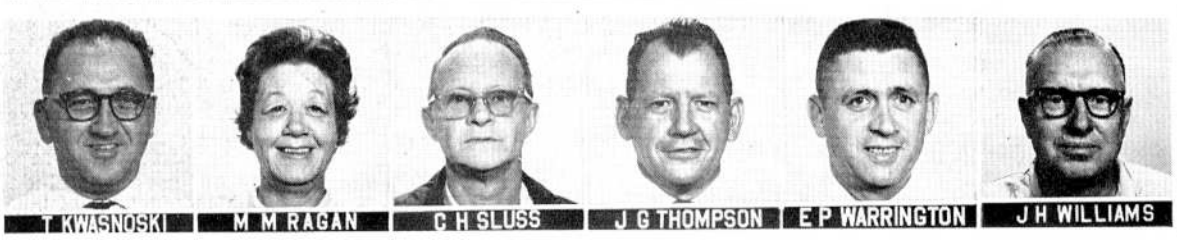
Don't you wish that you had the first dollar you earned? Well, Noah Hendrix has. Of course he has earned thousands of dollars since that first one but the fact remains that this is the first dollar he made when he started working in the Galloway Coal Company Mine at Carbon Hill, Ala., when he was 16 years old. He actually started to work for Galloway in their commissary after school when he was only 12 years old.

Hendrix has worked here as a maintenance mechanic in Cascade Maintenance, Fabrication and Maintenance Division since February, 1945. A native of Carbon Hill, he is married to the former Elizabeth Jenkins, also from Carbon Hill. They have a son, Jimmy, who has 15 years service in the U. S. Army, now stationed at San Antonio, Tex.

Hendrix's outside interests include coin collecting, travel, fishing and gardening. The Hendrixes live at 107 Jellico Lane in Oak Ridge.

We know what we are, but know not what we may be.

May's 25-Year Veterans



S-3472

'Traffic Jam' At the Circle of Willis

By T. A. LINCOLN, M.D.

The Circle of Willis (named after an English anatomist) is formed by smaller branches of the two major arteries which supply blood to the brain. It can be compared to a complicated highway interchange or traffic circle. When one or two entrances or exits get blocked, a traffic jam, or, in the brain, a stroke, normally occurs. Fortunately, in about half of normal adults, there are alternate routes, even reversals of flow, which often allow blood to get around an obstruction.

Dr. Lincoln

The major arteries which supply the brain are the internal carotids and the vertebrals. An internal carotid goes up to the brain on each side of the front of the neck, while a vertebral goes up deep on each side of the back of the neck. At the base of the brain, branches come off which form the circle.

Actually, the circle is a seven-sided figure. To form it, the two internal carotid arteries each send one branch forward (the anterior cerebral) and one small branch posterior (the posterior communicating). This back pair connect with two posterior cerebral arteries which come off the two vertebral arteries at a point where they join, thus forming the back side of the circle. Up front, a small anterior communicating artery connects the two anterior cerebrals and completes the seven-sided "circle."

'Collateral' Routes

Now imagine what would happen if one of the two posterior communicating arteries or the only one anterior communicating artery was missing. If the supply of blood coming up to the brain through one of the internal carotids or vertebrals becomes obstructed, the area of the brain supplied by that vessel would not get enough blood. If these communicating arteries were open, blood could go around the circle and supply the brain.

In addition to the Circle of Willis, there are other collateral routes where blood from one side of the brain can get to the other when the need is desperate. Unfortunately, they, too, may not be available. If a person was born without these communications it is unlikely they will develop. Even if they are small, they can enlarge when the need develops slowly.

Vague Symptoms

If these channels are never required, they may become obstructed by the same fatty deposits of atherosclerosis which block the larger vessels. For this reason, the younger a person is when he needs collateral circulation, the more likely it is to be available.

In some people, one of the internal carotids can be completely obstructed and the patient have virtually no symptoms. In those with poor collateral circulation, the gradual obstruction may produce transient attacks of lightheadedness, blurring of vision, numbness, weakness or paralysis on one side of the upper face or eye. Sometimes the only symptom is a transient defect or loss of the power to speak or comprehend what has been spoken.

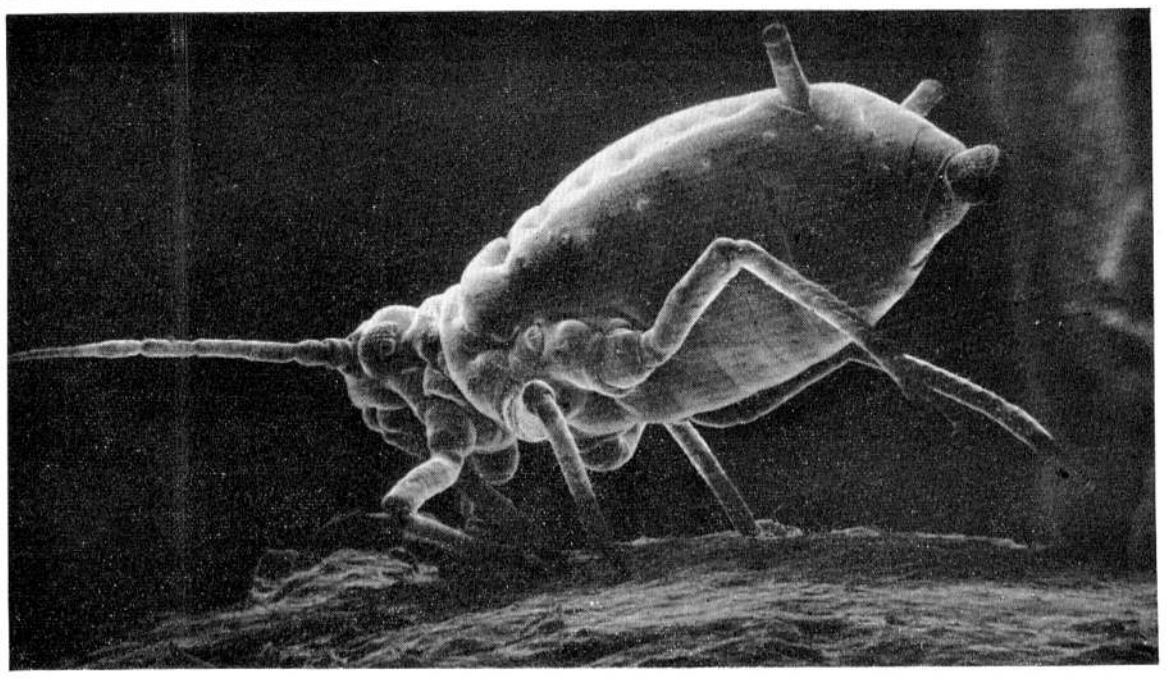
When the obstruction occurs in the vertebral system, the symptoms are often vague and confusing. There may be diminished or double vision, difficulty in speaking, or weakness and temporary paralysis on one side of the body. Sometimes attacks of nausea and dizziness are the only symptoms.

Surgical Correction

The duration of attacks may vary from a few seconds to a few hours. These episodes, when severe and followed by complete recovery, are often called "little strokes." The reason they are transitory is because they occur only when the demand for blood in the brain is increased or the blood pressure falls too low. Nervous or physical exhaustion, infections, and excessive smoking or drinking can sometimes precipitate an attack.

When an attack occurs, a careful evaluation is needed. In a few cases a surgical correction of the obstructed vessel is possible. In many cases the location of the obstruction can be determined by an arteriogram, during which a radiopaque dye is injected into the artery and rapid sequence x-ray pictures taken. In medical centers with much experience and meticulous technique, less than one percent have a complicating stroke. This small risk is justified only after a careful evaluation of the complete clinical picture.

About half of adults have a marvelous traffic circle at the base of their brain which provides collateral circulation when needed. Unfortunately, even these lucky people can have major difficulty if the obstructive disease is severe. Those not so lucky can sometimes be helped by surgical removal of the obstruction. To do so requires early detection, precise diagnosis and difficult surgery. Nevertheless, remarkable successes are no longer rare and may some day become common.



BUMP IN THE NIGHT—This isn't a thing thatgoes 'bump in the night;' it is a common garden-type of aphid, like the kind you might find on a rose. Man can now 'see' things like he never saw before through the eyes of a scanning electron microscope, which can magnify an image up to 30,000 times, and then record what it scans. Ted Nolan, electron microscopist in the Materials Development Department, Oak Ridge Gaseous Diffusion Plant, says that the 150 X photo above (when it was on a 3 x 4 photograph) shows the full view of the garden pest.

S-3629

Case Takes High Skeet Score in April Firings

Jack Case, Y-12, led April Skeet shooters with a near perfect 49.763 score. He was followed by Ben Etheredge, also from Y-12 with a 49.627. Joe Comolander, Y-12, placed third, with a close 49.482 tally.

Case, under penalty, dropped from winnings, giving Charley Asmanes a toe-hold into the winning circle with a 49.102.

Skeet April Scores:

Firer	H'Cap Score
R. A. Allstun, Y-12	47.706
C. Asmanes, Y-12	49.102
C. G. Brewster, Y-12	47.369
J. M. Case, Y-12	49.763*
J. P. Comolander, Y-12	49.482
W. H. Davey, Sr., K-25	47.625
B. F. Etheredge, Y-12	49.627
C. J. Kwiecien, ORNL	47.963
B. L. Powers, Y-12	47.460
V. F. Raaen, ORNL	48.080
B. Searles, Y-12	46.883
A. K. Van Hull, Y-12	45.948
W. E. Weathersby, Y-12	48.446
F. G. Welfare, ORNL	45.781

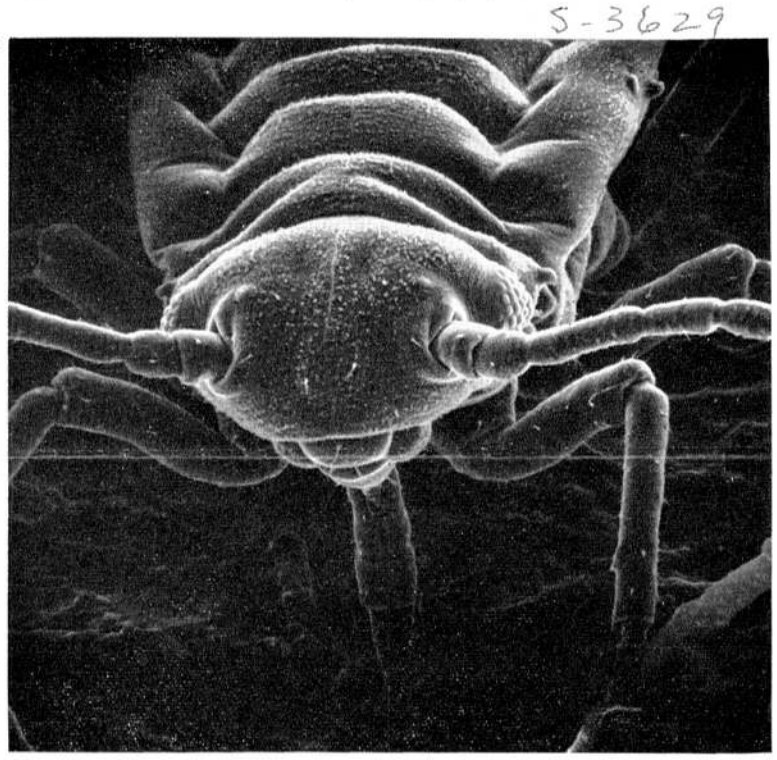
*Previous winner, under penalty.

PISTOL LEAGUE

The first match of the all Carbide .22 caliber pistol league is scheduled for Tuesday, June 1, 6 p.m., at the Oak Ridge Sportsmen's Association. Subsequent matches will be held on each Tuesday through August 24. Any employee in the Nuclear Division is eligible to shoot in these matches. Details may be obtained from J. P. De Luca, league director, on extension 3-1670; or Gordon Jones, statistical officer, 3-9317.

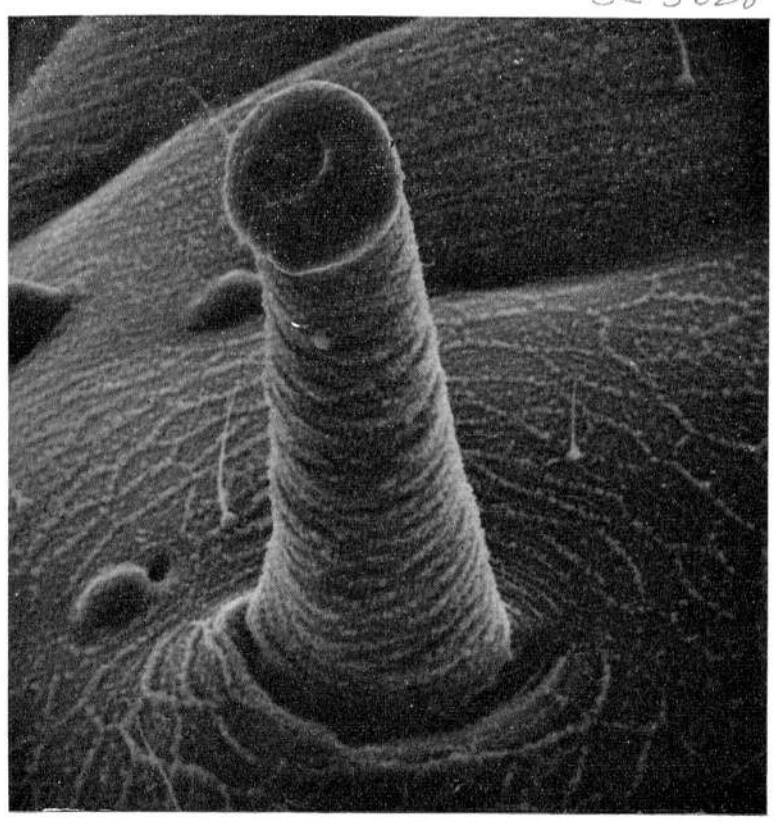
Drilling Record

The United States uranium mining industry surpassed its own record as it drilled 29,900,000 feet in search of the strategic ore in 1969.



HEAD ON—Magnified three times greater than the full-view seen in the top photograph, here is a head-on view of the aphid. Its proboscus is seen sunk down into the leafy section of the plant, drawing its food out. Note the compounded, many-faceted eye of the aphid.

S-3628



STILL FURTHER MAGNIFICATION—This photograph, even more magnified than the head-on view, shows the milk-gland of the aphid. This magnification was 1200 X (in the original) and is reduced to 250 X here in this dimension.

71 645

IN SAFEKEEPING—At the employee's option, U. S. Savings Bonds purchased through payroll deduction may be kept in safekeeping at the Central Payroll office at the Computing Technology Center. From left are Vernice Clower and Connie Barker, employees at Central Payroll who assist with the bond savings plan.

If You Choose, Central Payroll Will Hold Bonds

U. S. Savings Bonds — they're wonderful!

Using the Nuclear Division's computerized payroll savings plan, some bond savers prefer to receive the bonds at home—where they can count them, run through them with their fingers, or just watch them grow. Others are content to let the Division's Central Payroll keep them for safekeeping as they accumulate.

This convenient option is just one of several services offered through Central Payroll to promote bond purchases and employee convenience.

More Than 3,200 Buy Bonds

Last month, some 2,150 chose to receive bonds totalling $58,274 at their homes, while about 630 preferred Central Payroll to hold theirs, which totalled $21,431. These dollar totals are the issue price numbers—that is, the price for which the bonds were purchased.

Through the end of April, Nuclear Division employees had purchased millions of dollars worth of savings bonds through payroll deduction, including some $747,384 for nearly 500 employees which are being held for employee convenience at Central Payroll.

The number of bond holders has dramatically increased during recent drives. A little more than a year ago, only about 700 were purchasing bonds through the payroll savings plan. Last year's drive increased the total to more than 3,200. The goal for the current drive is to reach more than 7,000.

Many Advantages

The computerized payroll system introduces many advantages. For example, you can now name more than one bond recipient and/or variable bond denominations. And, if you wish, you may alternate among two or more persons on a routine basis. In the past, all bonds purchased through payroll savings had to be made out to the same recipient.

Safe-keeping receipts or bonds (depending on your choice) are now mailed once a month, instead of once a week as was done under the previous system. The system in no way affects the amount of interest or the time that the bonds go into effect. The individual merely receives the month's receipt or bonds accumulated instead of individual notices each week.

All payrolls—monthly, weekly, and hourly—now receive bonds or bond-total statements at the end of each month.

Those interested in making out a new bond or adding the name of a new recipient should check with leaders in the current drive or with their home plant's Paymaster's Office. The social security numbers and full names of new recipients are required information in making such a change.

POPULAR U.S. BONDS

Since 1941, Americans have bought $182 billion worth of Savings Bonds. Now about 120 million individual bonds are sold each year, twice the number 20 years ago. The average of those on the Payroll Savings Plan is $311 a year for each participant, and these account for about 70 percent of the national sales. How about you? Are you on payroll savings through U. S. Savings Bonds?

New Booklet

(Continued from Page 2)

the invisible radiation that occurs naturally on earth. How scientists are studying this low-level radiation and the effects of low and high level radiation are explained.

Vernon Pizer, a professional writer who has contributed more than 200 articles on a wide range of subjects, is the author of "Preserving Food with Atomic Energy." The booklet covers man's early efforts at preserving food through sun-drying and parching and cites the latest efforts in using nuclear radiation to combat food spoilage.

The basic principles of atomic energy and the many peaceful uses of atomic energy are covered in "Atomic Energy and Your World." It is co-authored by J. Joe Thomas, a veteran science teacher, and Samuel Glasstone, award-winning writer of 31 books on science. The booklet begins with a basic description of matter and concludes with a discussion of major applications of nuclear energy, such as generation of electric power through nuclear fission.

All books in the series are illustrated and include a reference list of additional materials. Single copies of the booklets are available at no charge from the U. S. AEC Division of Technical Information, P. O. Box 62, Oak Ridge.

Everybody else gets your money. How about you? Pay yourself first — in United States Savings Bonds, with the interest bonus.

17-Team Softball League Started

The first big game of a new season of softball saw the Losers win! They downed the Energetics 11 to 7.

The Rangers eked by the All Stars 7 to 5, as the Buccaneers made play at the expense of the Bat Boys 28 to 7.

Despite rain week before last, the Devils trounced the Turnabouts 25 to 5, as the Colts raided the Raiders 21 to 11. Jim Shoemaker scored two big homers for the winners.

Last week, it was the Raiders over the Centaurs by a couple of runs . . . 8 to 6. The Rangers lowered some kind of boom on the Devils, defeating them 16 to 5.

The Bat Boys beat the Hoot Owls 16 to 4 . . . the All Stars outdistanced the K-25 Devils 27 to 5.

The Buccaneers belted the Turnabouts 18 to 5 . . . while the Centaurs gained a forfeit win over the Bottlenecks.

League standings follow:

Team	W	L
Rangers	2	0
Buccaneers	2	0
K-25 Colts	1	0
Losers	1	0
Gashouse Gang	1	0
Raiders	1	1
Bat Boys	1	1
All Stars	1	1
Centaurs	1	2
K-25 Devils	1	2
Hoot Owls	0	1
Energetics	0	1
Bottlenecks	0	1
Turnabouts	0	2
M Wingers	0	0
Eagles	0	0
17 Knockers	0	0

'Architecture' Is Chosen As Camera Club Theme

The Carbide Camera Club announces its competition for June as "Architecture." Photographs should be submitted by June 10. Additional information may be obtained from R. S. Stone, R. Lorenz, or S. P. Leibo. Newcomers are particularly welcomed into the photographic competition.

April's winners included C. Richter, and C. DuBose in the black and white competition; P. Turner and W. L. Harper in the color competition; D. Hendrix, Harper and J. S. Bullock in the slide competition.

An up-to-date membership list is being prepared for members.

George Reimann Takes 2nd Hi-Power Rifle Race

George Reimann, ORNL, won the second match of the All Carbide High Power Rifle League with a 464 out of a possible 500. In second place was Jack Mrochek, also of ORNL, with a 459. Y-12's Jack Huff came in third with 454.

Other scores were:

Bill Galyon, Y-12	453
Don Kiplinger, ORNL	444
A. A. Abbatiello, ORNL	441
Carl Brewster, Y-12	425
Hugo Bertini, ORNL	419
Dudley Hewett, ORNL	407
Vic Fowler, ORNL	407
Dennis Chilcote, ORNL	406
Troy Burklow, Y-12	377
Charley Harrison, ORNL	359
Hicklen Harrell, AECOP	306
Cecil Ramey, Y-12	219

UNION CARBIDE CORPORATION
NUCLEAR DIVISION
P. O. BOX Y, OAK RIDGE, TENNESSEE 37830

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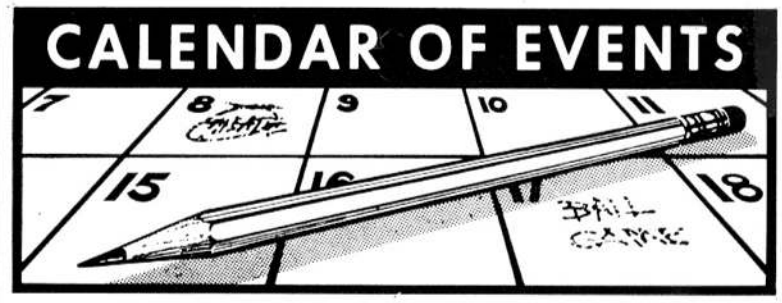

TECHNICAL

May 24-26

Conference and workshop sponsored by the Molecular Anatomy Program and National Cancer Institute: "Fetal Antigens and Cancer." Central Auditorium, Building 4500N, ORNL.

May 27

Biology Division Seminar: "The Role of Macrophages in Immunity to Tumors," Peter Alexander, Chester Beatty Research Institute, Royal Cancer Hospital, England. First Floor Tower Annex Conference Room, Building 9207, 12:15 p.m.

May 27-28

ORNL Desalination Information Meeting. Central Auditorium, Building 4500N.

COMMUNITY

May 21

Art Center Medium of the Month: Stitchery by Ellen Jones, Art Center, 7:30 p.m.

May 21-23

Religious Art Show. Education Building, Grace Lutheran Church, 131 W. Gettysburg Ave. Hours Friday, 7-9 p.m.; Saturday, Sunday, 2-4 p.m., 7-9 p.m. Admission free.

May 22

Oak Ridge Playhouse Annual Spring Meeting and Party. Oak Ridge Playhouse, 8:30 p.m. Everyone welcome.

May 23

Oak Ridge Civic Music Association Coffee Concert, "The Kit Haaland Trio." Civic Center, 8 p.m. No admission.

GROWING SUPERMARKETS

Today 90,000 separate items are sold in U. S. food stores, with 6,000 new, improved or changed items being added every year. As to what any one store may carry, the average supermarket offers 8,000 items, accepts 500 new ones a year and discontinues 200—for an annual net gain of 300.

BOSS-OF-THE-YEAR—John Shacter, director of the Atomic Energy Commission Combined Operations Planning (AECOP), was recently named Boss of the Year by the National Secretaries Association, Oak Ridge Chapter. He receives his trophy and plaque from Oak Ridge attorney James B. Scott, Jr., last year's BOTY. From left, Scott, Nelline Ross, Shacter's secretary, Shacter, and Mrs. Shacter.